

Remarks

The Office Action of June 18, 2010, has been carefully considered.

It is noted that the title of the invention is objected to.

It is noted that Claims 37, 39 – 44, 63, and 70 are rejected under 35 USC 103(a) over the patent to Bachrach in view of the patent to Jackson and the patent to Suman.

Claim 70 is rejected under 35 USC 103 (a) over Bachrach in view of Jackson and Suman and further in view of the patent to Audsley.

Claims 37 -- 39, 45, 46, 49 – 51, 57 and 66 – 69 are rejected under 35 USC 103(a) over JP 50060808 in view of Jackson and Suman.

Claims 47 and 48 are rejected under 35 USC 103(a) over JP 50060808 in view of Jackson and Suman.

Claims 54 – 56 and 58-62 are rejected under 35 USC 103(a) over JP 50060808 in view of Jackson and Suman, and further in view of the patent to Henriksen.

Claims 64 and 65 are rejected under 35 USC 103(a) over JP 50060808 in view of Jackson and Suman, and further in view of the patent to Mosley.

Claims 73 and 74 are rejected under 35 USC 102 (b) over the patent to Longworth.

In connection with the title, Applicant has canceled the original title and has adopted the title suggested by the Examiner.

In view of the Examiner's rejections of the claims, Applicant has canceled claim 74 and amended independent claim 73.

It is respectfully submitted that the claims now on file differ essentially and in an unobvious, highly advantageous manner from the constructions disclosed in the references.

Turning now to the references, the patents to Bachrach and Jackson were discussed in the last filed amendment are acknowledged by the Examiner as not teaching a flocking as recited in claim 37 of the present application.

For the flocking feature the Examiner relies on the patent to Suman, et al. Suman et al. disclose a rotary blower with an abradable coating. Applicant submits that the reference does not teach a flocking as recited in the presently claimed invention. In addition, the secondary reference to Rangaswamy, which was not directly relied upon by the Examiner, also does not teach a flocking as in the present invention. Both the references only refer to an abradable coating, without making any mention of a flocking. Applicant submits that the teachings of these references does not make it obvious to one skilled in the art to provide a pump with a flocking, as of the priority date of the present application.

As an aid, Applicant has attached a two-page printout from “Wikipedia” regarding flocking. From this attachment it can be seen that flocking is the deposition of small fiber particles onto a surface. Such fiber particles may, at least in use, have a common direction, normally an acute angle with the respective surface that the fibers are adhered to. This is perhaps possible for common surfaces building a gap relative to a rotating part. In the present invention, as specifically recited in claim 37, however, the piston moves in an oscillating manner about the axis of rotation. As such, the flocking is moved by the piston in a first direction and then subsequently in a second, opposite direction. Applicant submits that it would not be obvious to one of ordinary skill in the art to use a flocking in light of this oscillating movement because the mechanical action to which the flocking is subjected due to the oscillating movement of the piston is unusual.

Therefore, it is respectfully submitted that the combination of references does not teach a pump having a flocking as recited in independent claim 37 presently on file.

In view of these considerations, it is respectfully submitted that the rejection of claims 37, 39-44, 63 and 70 under 35 USC 103 (a) over a combination of the above discussed references is overcome and should be withdrawn.

The same arguments apply equally to the rejection of claim 37 based on JP 50060808 as the primary reference combined with Jackson and Suman. This combination of references also does not teach flocking coated on a pump piston and/or a pump housing as in the presently claimed invention. Thus, it is respectfully submitted that the rejection of claims 37-39, 45, 46, 49-51, 57 and 66-69 under 35 USC 103 (a) is overcome and should be withdrawn.

The additional references which were cited in rejecting claims 47, 48, 54-56, 58-62, 64, 65, and 70 have also been considered. Applicant submits that none of these references add anything to the teachings of the references cited against independent claim 37 so as to suggest the presently claimed invention. Therefore, it is respectfully submitted that the rejections of these claims under 35 USC 103 (a) are overcome and should be withdrawn.

The patent to Longworth discloses a high pressure blower. Longworth does not disclose exchangeable strips having the valves. Additionally, Longworth does not disclose a valve strip formed in a mirror image with respect to a longitudinal axis with the inlet valves and the outlet valves lying opposite one another with respect to a center longitudinal axis of the valve strip. Referring to Figures 2 and 3 of Longworth, such a longitudinal axis would extend orthogonal to the cross section shown. In this direction, however, valves d are each outlet valves or each inlet valves. Thus, Longworth does not disclose the present invention.

In view of these considerations it is respectfully submitted that the rejection of claims 73 and 74 under 35 USC 102(b) over the above discussed reference is overcome and should be withdrawn. Reconsideration and allowance of the present application are respectfully requested.

No fees are believed to be due. However, if any fee is determined to be due, authorization is hereby given to charge the fee to deposit account #02-2275. Pursuant to 37 C.F.R. 1.136(a)(3), please treat this and any concurrent or future reply in this application that requires a petition for an extension of time for its timely submission as incorporating a petition for extension of time for the appropriate length of time. The fee associated therewith is to be charged to Deposit Account No. 02-2275.

Respectfully submitted

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CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this document is being electronically transmitted to the Commissioner for Patents via EFS-Web on October 15, 2010.

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Flocking (texture)

From Wikipedia, the free encyclopedia

Flocking is the process of depositing many small fiber particles (called **flock**) onto a surface. It can also refer to the texture produced by the process, or to any material used primarily for its flocked surface. Flocking of an article can be performed for the purpose of increasing its value in terms of the tactile sensation, aesthetics, color and appearance. It can also be performed for functional reasons including insulation, slip-or-grip friction, and low reflectivity.

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Uses

Flocking is used in many ways. One example is in model building, where a grassy texture may be applied to a surface to make it look more realistic. Similarly, it is used by model car builders to get a scale carpet effect. Another use is on a Christmas tree, which may be flocked with a fluffy white spray to simulate snow. Other things may be flocked to give them a velour texture such as t-shirts, wallpaper or upholstery.

Besides the application of velvety coatings to surfaces and objects there exist various flocking techniques as a means of color and product design. They range from screen printing to modern digital printing in order to refine for instance fabric, clothes or books by multicolor patterns. Presently, the exploration of the flock phenomenon can be seen in the fine arts.

Flocking in the automotive industry is used for decorative purposes and may be applied to a number of different materials. Many rally cars also have a flocked dashboard to cut down on the sun reflecting through the windscreen. A view on the present state-of-the-art of flocking can be found in the first international exhibition "Flockage: the flock phenomenon" in the Russell-Cotes Art Gallery & Museum in Bournemouth.^[1]

In the photographic industry, flocking is one method used to reduce the reflectivity of surfaces, including the insides of some bellows and lens hoods. It is also used to produce light-tight passages for film such as in 135 film cartridges.

Process

Flocking is the application of fine particles to adhesive coated surfaces. Nowadays, this is usually done by the application of a high-voltage electric field. In a Flocking Machine the "flock" is given a negative charge whilst the substrate is earthed. Flock material flies vertically onto the substrate attaching to previously applied glue. A number of different substrates can be Flocked including; textiles, fabric, woven fabric, paper, PVC, sponge, toys, automotive plastic.



T-Shirt printed with flocking technique (lower half)

- The majority of flocking done worldwide uses finely cut natural or synthetic fibers. A flocked finish imparts a decorative and/or functional characteristic to the surface. The variety of materials that are applied to numerous surfaces through different flocking methods create a wide range of end products. The flocking process is used on items ranging from retail consumer goods to products with high technology military applications.

History

Historians claim that flocking can be traced back to circa 1000 BC, when the Chinese used resin glue to bond natural fibers to fabrics. Fiber dust was strewn onto adhesive coated surfaces to produce flocked wall coverings in Germany during the Middle Ages. In France, flocked wall coverings became popular during the reign of Louis XIV of France.

References

1. ^ "For the Love of Flock – Flocking Lovely!". *Free Gallery Talk*. Russell-Cotes Art Gallery & Museum. May 9, 2008. <http://russell-cotes.bournemouth.gov.uk/News/2008/FreeGalleryTalkFlock.asp>. Retrieved 2008-05-23.

See also

- Finishing (textiles)
- Surface finishing

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Categories: Artistic techniques

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